

Study Guide

For use with pages 329–333

GOAL Use a fraction to find the percent of a number.**VOCABULARY**

The word *percent* means “per hundred.” A **percent** is a ratio whose denominator is 100. The symbol for percent is %.

EXAMPLE 1 Writing Percents as Fractions, Fractions as Percents

Write 80% and 4% as fractions in simplest form.

a. $80\% = \frac{80}{100} = \frac{4}{5}$

b. $4\% = \frac{4}{100} = \frac{1}{25}$

Write $\frac{19}{20}$ and $\frac{13}{50}$ as percents.

a. $\frac{19}{20} = \frac{19 \cdot 5}{20 \cdot 5} = \frac{95}{100} = 95\%$

b. $\frac{13}{50} = \frac{13 \cdot 2}{50 \cdot 2} = \frac{26}{100} = 26\%$

Exercises for Example 1

Write the percent as a fraction in simplest form, or write the fraction as a percent.

1. 27%

2. 90%

3. $\frac{13}{20}$

4. $\frac{12}{25}$

Common Percents			
$10\% = \frac{1}{10}$	$20\% = \frac{1}{5}$	$25\% = \frac{1}{4}$	$30\% = \frac{3}{10}$
$40\% = \frac{2}{5}$	$50\% = \frac{1}{2}$	$60\% = \frac{3}{5}$	$70\% = \frac{7}{10}$
$75\% = \frac{3}{4}$	$80\% = \frac{4}{5}$	$90\% = \frac{9}{10}$	$100\% = 1$

Study Guide

For use with pages 329–333

EXAMPLE 2 Writing a Probability as a Percent

You randomly choose a letter from a bag that contains 20 letters. There are 5 vowels and the rest are consonants. What is the probability that you choose a consonant? Write your answer as a percent.

Solution

There are 20 possible outcomes, and $20 - 5 = 15$ outcomes are favorable.

$$\begin{aligned} P(\text{consonant}) &= \frac{15}{20} && \text{Write probability as a fraction.} \\ &= 75\% && \text{Write fraction as a percent.} \end{aligned}$$

Answer: The probability that you choose a consonant is 75%.

Exercise for Example 2

5. You spin a spinner with 10 equal sections. One section is red, 4 sections are blue, 3 sections are green, and 2 sections are white. Find the probability that the spinner stops on blue. Write your answer as a percent.

EXAMPLE 3 Finding a Percent of a Number

In your town, it rained 30% of the days in April. How many days in April did it rain?

Solution

To find 30% of the number of days in April, 30, use the fact that $30\% = \frac{3}{10}$. Then multiply.

$$\begin{aligned} 30\% \text{ of } 30 &= \frac{3}{10} \cdot 30 && \text{Write percent as a fraction.} \\ &= \frac{90}{10} && \text{Multiply.} \\ &= 9 && \text{Simplify.} \end{aligned}$$

Answer: It rained 9 days in April.

Exercises for Example 3

Find the percent of the number.

- | | |
|--------------|---------------|
| 6. 60% of 5 | 7. 5% of 20 |
| 8. 10% of 10 | 9. 43% of 100 |